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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/700,528 | 11/05/2003 | Tae Hoon Lee | 27427.008.00-US | 5907 |
| 30827 | 7590 | 10/05/2005 | | |
| MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006 | | | EXAMINER HODGES, MATTHEW P | |
| | | | ART UNIT 2879 | PAPER NUMBER |

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,528

Applicant(s)

LEE ET AL.

Examiner

Matt P. Hodges

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-11, 13-17 and 19-32 is/are rejected.
- 7) ☒ Claim(s) 7, 12 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/5/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claims 28-32 are objected to because of the following informalities:

Claims 28-32 appear identical in scope to claims 1-5.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Miwa et al. (US 6,268,693).

Regarding claim 23-26, Miwa discloses (see figure 2) a cathode ray tube including a front panel with an outer radius of curvature between 10,000mm and 100,000mm. Further the transmittance of the bulb at both the peripheral region and the center region is 56%.

Claims 1, 3-6, 8-11, 13-17, 19-28, and 30-32 rejected under 35 U.S.C. 102(e) as being anticipated by Baek et al. (US 2004/0239232)

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The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 6, 23-26, and 28, Baek discloses (See figure 2) a cathode ray tube panel including a inside surface, a central portion with a transmission rate of between 45-75%, the outside surface being with a radius of curvature of 30,000mm, and the thickness of the central portion, vertical axis end, and diagonal end being $T_d/CFT = 1.5$ and $T_v/T_d = 0.97$. (Paragraphs 0034, 0045, and table 1)

Regarding claims 3, 4, 8, 9, 30, and 31, the values of R_h , R_d , and R_v are related as follows $R_v < R_d < R_h$. Further all values in the area of 3R. (Paragraph 0046 and 0049).

Regarding claims 5, 10, and 32, Baek discloses values of the differences between T_d , T_h , and T_v with CFT being inside the claimed ranges. (See paragraph 0055 and Table 1). (The solutions for T_v and T_d are explicit while T_h must be calculated from the possible values of T_v).

Regarding claims 11 and 17, Baek further discloses the ratios of R_h/R_d being 1.4 and R_v/R_d being 0.5. Baek further discloses the use of ranges for values of R_h and R_d thus further including a value of 1.2. (See paragraphs 0049 and Table 1).

Regarding claims 13, 14, 16, 19, 20, and 22, claims 13, 14, 16, 19, 20, and 22 are rejected for the reasons cited in the rejection of claims 3, 4, 8, and 9 above.

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Regarding claims 15 and 21, claims 15 and 21 are rejected for the reasons cited in the rejection of claim 5 above.

Regarding claim 27, Baek further discloses the use of an interior radius of curvature being between 2000 and 7000 mm. (Paragraph 0046).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 28-30 are rejected under 35 U.S.C. 103(a) as being obvious over Jung.
(US 2004/0000860).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in

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accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 1 and 28, Jung discloses (See figures 1, 3, and 4) a cathode ray tube panel including a inside surface, a central portion with a transmission rate of between 45-75%, the outside surface being flat, and the thickness of the central portion, vertical axis end, and diagonal end being $T_d/CFT = 2.04$ and $T_v/T_d = 0.99$. Jung does not appear to specify the flatness ratio of the outside of the front panel, however Jung does disclose the panel to be flat. It is well established in the art of flat panel CRTs that a substantially flat panel would have a radius of curvature in the area of 100,000 mm that would be greater than the flatness ratio of 17. The use of a substantially flat screen of 100,000mm advantageously provides for a desirable visual flatness by the end user. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the flatness of 100,000 mm into the device as disclosed by Jung in order to advantageously provide for a desirable visual flatness.

Regarding claims 2 and 29, Jung further discloses the use of a skirt portion where the length of the skirt portion divided by the diagonal length of the effective surface is between .09 and .145. (Paragraph 0068).

Regarding claims 3 and 30, Jung further discloses the radius of diagonal curvature being between 1.29R and 4.35R. (Paragraph 0057).

Allowable Subject Matter

Claims 7, 12, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 7, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 7, and specifically comprising the limitation a cathode ray tube including a transmittance between 45 and 75% in the center portion, and where the ratio of the length of the skirt portion to the diagonal of the panel face is between 0.146 and .017.

Regarding claim 12, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 12, and specifically comprising the limitation a cathode ray tube including a transmittance between 45 and 75% in the center portion, and where the ratio of the length of the skirt portion to the diagonal of the panel face is between 0.13 and .017.

Regarding claim 18, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 18, and specifically comprising the limitation a cathode ray tube including a transmittance between 45 and 75% in the center portion, and where the ratio of the length of the skirt portion to the diagonal of the panel face is between 0.146 and .017.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Kim et al. (US 2003/0117060) discloses a CRT panel with transmittance between 45% and 75%.

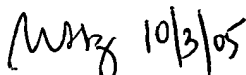
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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 10/3/05
MARICELI SANTIAGO
PRIMARY EXAMINER